CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ORDER NO. 2001-103
WASTE DISCHARGE REQUIREMENTS
FOR THE
OTAY LANDFILL
SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board) finds that:

Background

1. On March 12, 1990, this Regional Board adopted Order No. 90-09, Waste Discharge Requirements for the County of San Diego, Otay Annex Sanitary Landfill. Order No. 90-09 established requirements for the disposal of nonhazardous wastes to the Otay Annex Landfill.

2. On August 16,1993, this Regional Board adopted Order No. 93-86, Waste Discharge Requirement Amendment for all MSW Landfills in this Region, to Implement State Water Board Resolution No. 93-62, Adopted June 17,1993, as State Policy for Water Quality Control Under Section 13140 of the Water Code. Order No. 93-86 amended waste discharge requirements for all landfills in this region which received waste after October 9,1991. By incorporating regulations contained in 40 Code of Federal Regulations, Part 258, Order No. 93-86 brought the municipal solid waste landfill into compliance with State and Federal regulations.

4. On February 13, 1997, the Regional Board adopted Addendum No. 1 to Order 90-09 to allow the disposal of 35,000 cubic yards of burn ash contaminated soils from the Shinohara Property into the Otay Landfill and Addendum No. 2 to Order 90-09 to allow the discharge of 23,000 tons of sludge and 600 tons of grit and bar screen waste per year for the Encina wastewater treatment plant.

5. By letter dated August 19,1997, Mr. Joseph Minner, Director of Solid Waste Division, Department of Public Works, County of San Diego, notified the Regional Board that the County of San Diego has sold the Otay/Otay Annex Sanitary Landfill to Otay Landfill, Inc. and Allied Waste Industries, Inc. On, October 15, 1997, the Regional Board adopted Addendum No. 3 to Order 90-09 to incorporate the adjacent non-hazardous waste (Class II-1 and 2) units from the former hazardous waste disposal area (Class I Order No. 74-44) at the Otay Landfill.

3. On June 22, 1999, Otay Landfill Inc. submitted a Report of Waste Discharge for a Corrective Action Program (CAP) in response to the identification of volatile organic constituents (VOCs) by the County of San Diegoin perched groundwater underlying the southeastern corner of the Otay Landfill, south of Canyon 3 and adjacent to an inactive waste fill area that terminates near the southern property boundary. The County had implemented interim corrective measures which consisted of pumping from 2 shallow groundwater extraction wells in an effort to dewater the impacted perched zone. As corrective action, Otay Landfill Inc. proposed the installation of a slurry barrier wall across the traverse of the canyon at the southern boundary, the installation of groundwater extraction wells upgradient of the slurry barrier wall to extract perched groundwater and continued expansion of the gas collection system to control gas migration in the vadose area beneath the refuse mass.

6. On June 18, 1999, the San Diego County Solid Waste Local Enforcement Agency detected the presence of a radioactive source within an inactive area at the Otay Landfill within the green waste disposal area. Otay Landfill Inc. is currently working with the County of San Diego, radiation health officer and the Department of Health Services, Radiologic Health Branch towards a solution to the deposition of the material. Sampling results indicated that the radioactive material is present within the intermediate cover soils placed by the County between 1986-1989 and not in the underlying wastes. Based upon the report, it is estimated that 575 cubic yards of soils exhibiting radioactivity composed of Radium 226, Uranium 238 and Thorium 232 are present within a 6-18 inch layer of cover soils within a 0.4 acre area of the green waste site.

Regional Board staff submitted a request to OL to submit a technical report containing an evaluation of potential impacts to water resources at the site pursuant to California Water Code Section 13267. On December 26, 2000, OL submitted a technical report which indicated that based on site specific conditions and calculations, the soils which exhibit elevated activity will not result in a release in excess of applicable water quality objectives or cause degradation of the waters to the State. In addition, the placement of additional cover materials would provide additional mitigation safeguards to surface water and groundwater.

Subtitle D

6. On August 16, 1993, this Regional Board adopted Order No. 93-86**, Waste Discharge Requirement Addendum for all MSW landfills in this Region, to Implement State Water Board Resolution No.93-62, As State Policy for Water Quality Control Under Section 13140 of the Water Code.** Order No. 93-86 updated waste discharge requirements for all landfills in this region that

received wastes after October 9, 1991, which includes the Otay Landfill. By incorporating regulations contained in 40 Code of Federal Regulations, Part 258, Order No. 93-86 brought these landfills into compliance with both State and Federal Regulations.

7. On October 12, 1993, the County of San Diego, former owner of the Otay Landfill transmitted the required reports for compliance with Order No. 93-86. The following reports were required under Order no. 93-86:

a. *100-year Floodplain Report*

Section 3 of Order No. 93-86 requires the submittal of a report, which demonstrates whether or not the Otay Landfill is within a 100-year floodplain. The 100-year Floodplain Report indicated that the Otay Landfill is not located within a 100 year floodplain area.

b. *Wetlands Report*

Section 4 of Order No. 93-86 requires the submittal of a report, which demonstrates whether or not the Otay Landfill contains or adjoins wetlands. The Wetlands Report indicated that no wetland habitat exists within or adjacent to the Otay Landfill.

c. *Proximity to a Drinking Water Intake Report*

Section 8 of Order No. 93-86 requires the submittal of a report, which demonstrates whether or not the landfill is located within one mile of a drinking water intake. The report indicated that there are no drinking water sources located within a one-mile radius of the Otay Landfill.

d. *Closure and Post-Closure Maintenance Plan*

Section 14 of Order No. 93-86 requires the submittal of a closure and post-closure maintenance plan for the Otay Landfill. Otay Landfill Inc. submitted a preliminary closure and post-closure maintenance plan (PCPCMC) dated April 2000. The submittal of the PCPCMP meets the requirement for the closure and post-closure maintenance plan required under the federal MSW regulations.

e. *Existing Footprint*

Section 4 or Order No. 93-86 requires documentation of the existing footprint of the Otay Landfill on October 9, 1993. On October 12, 1993, the County of San Diego, former owner of the Otay Landfill transmitted the required documentation for compliance with Order No. 93-86.

Disposal of Contaminated Soils

8. On June 7, 1999, this Regional Board adopted Addendum No. 1 to Order No. 93-86, **Maximum Concentration Limits for Soils Containing Nonhazardous Concentrations of Petroleum Hydrocarbons, Organic and Inorganic Compounds, Metals, and Pesticides for MSW Landfills with Subtitle D liners.**

9. Landfills with liners and leachate collection systems approved in accordance with California Code of Regulations, Title 27, Division 2 (hereinafter CCR Title 27) provides enhanced waste containment and an additional level of protection against leakage as compared to unlined landfills.

10. Pursuant to requirements established in Section 25157.8(a) of the California Health and Safety Code, concentrations of petroleum hydrocarbons, organic and inorganic compounds, metals and pesticides that are discharged to lined waste management units, shall be considered to not pose a significant threat to water quality. Soil wastes which contain contaminant levels above the threshold concentrations listed in the specifications of this Order, may not be discharged at these sites.

Engineered Alternative Liner

11. On November 7, 1994, RWQCB staff approved an alternative liner design for the lateral expansion of a portion of the Otay Landfill known as Canyon 3. The approval was based upon review of technical documents received August 7, 1992, February 2, 1993, June 22, 1994 and September 23, 1994. The technical documents indicate that the alternative liner design satisfies the performance criteria contained in 40 CFR, Section 258.40(a)(1) and (c), and satisfies the criteria for an engineered alternative to the Prescriptive Design as defined in the State Water Resources Control Board Resolution No. 93-62, where the performance of the alternative composite liner's components, in combination, equal or exceed the waste containment capability of the Prescriptive Design.

Ground Water Quality

12. The County of San Diego submitted a Solid Waste Assessment Test (SWAT) in August 1989. The SWAT report was prepared to satisfy the requirements specified in the California Water Code Section 13273, to determine whether hazardous waste migration has occurred to surface and/or ground water from the landfill. The SWAT report indicated the ground water monitoring system has detected the migration of waste constituents from the landfill to ground water. The report indicated the presence of Benzene, Chlorobenzene, Chloroform, 1,2- and 1,4-Dichlorobenzene, 1,1-Dichloroethene, trans-1,2-Dichloroethene, Ethylbenzene, Toluene, 1,1,1-Trichloroethane, and Trichloroethene in downgradient monitoring wells. In addition, downgradient-monitoring wells exhibited high levels of iron, lead, and manganese in excess of drinking water standards.

13. Groundwater beneath the Otay Landfill exists in two (2) shallow perched zones of limited areal extent and in two (2) deeper regional aquifers at depths ranging between 269 feet above MSL for the shallow aquifers to 85 feet above MSL for the deeper regional aquifer. The perched aquifers are located within the Sweetwater Formation. The deeper regional aquifers are located within the Mission Valley Formation.

Water Quality Control Plan

13. The **Water Quality Control Plan Report, San Diego Basin (9)** (hereinafter Basin Plan), was adopted by this Regional Board on September 8, 1994, and subsequently approved by the State Water Resources Control Board (State Board) on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the Regional Board and approved by the State Board. The Basin Plan designates beneficial uses and narrative and numerical water quality objectives, and prohibitions, which are applicable to the discharges regulated under this Order.

14. The Otay Landfill is located within the Otay Hydrologic Area Boundary (10.20) of the Otay Hydrologic Unit. The landfill is located in the county of San Diego, surrounded by the City of Chula Vista and the Otay Class III Landfill. It is situated on the north side of Otay Valley Road approximately one mile east of Interstate 805.

15. The Basin Plan established the following beneficial uses of surface waters of the Otay Hydrologic Area (10.20):

a. Inland Surface Waters
1. Municipal **
2. Agricultural Supply
1. Industrial *

b. Groundwater
1. Municipal **
2. Industrial Service Supply
3. Contact water recreation
4. Non-contact water recreation
5. Warm Fresh Water Habitat

Note * Potential Beneficial Use
** Excepted from Municipal use

16. The Basin Plan established the following water quality objectives for water of the Otay Hydrologic Area (10.20):

{PRIVATE }Constituent	Surface Water	Ground Water[2]
Total Dissolved Solids	1000 mg/l	--
Chloride	400 mg/l	--
Percent Sodium	60%	--
Sulfate	500 mg/l	--
Nitrate (as NO_3)	---	--
Nitrogen & Phosphorus	---[1]	---

Iron	0.3 mg/l	--
Manganese	0.05 mg/l	--
Methylene Blue Active Substances	0.5 mg/l	--
Boron	0.75 mg/l	--
Dissolved Oxygen	---	---
Odor	None	--
Turbidity	20 NTU	--
Color	20 Units	--
Fluoride	1.0 mg/l	--

The above concentrations not to be exceeded more than 10% of the time.

Note: mg/l = milligrams per liter
NTU = Nephelometric Turbidity Units

Concentrations of nitrogen and phosphorus, by themselves or in combinations with other nutrients, shall be maintained at levels below those which stimulatealgae and emergent plant growth. Threshold total Phosphorus (P) concentrations shall not exceed 0.05 mg/L in any stream at the point where it enters any standing body of water, nor 0.025 mg/L in any standing body of water. A desired goal in order to prevent plant nuisances in streams and other flowing waters appears to be 0.1 mg/L total P. These values are not to be exceeded more than 10 percent of the time unless studies of the specific water body in question clearly show that water quality objective changes are permissible and changes are approved by the Regional Board. Analogous threshold values have not been set for nitrogen compounds; however, natural ratios of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld. If data are lacking, a ratio of N:P = 10:1 shall be used.

The water quality objectives apply to the portion of the Otay HA 10.20 limited to lands within and tributary to Salt Creek on the east and Poggi Canyon on the west and including several smaller drainage courses between these tributaries of the Otay River.

17. The Basin Plan also contains the following prohibitions applicable to the discharge:

"The dumping, deposition or discharge of waste directly into waters of the State, or adjacent to such waters in any manner which may permit its being transported into the waters is prohibited, unless authorized by the Regional Board."

"The discharge of waste into a natural or excavated site below historic water levels is prohibited, unless the discharge is authorized by the Regional Board."

"The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the state or which unreasonable affect, or threaten to affect, beneficial uses of such waters is prohibited."

CEQA and Other Legal References

18. This Order implements:

a) Water Quality Control Plan, San Diego Basin – Region 9;

b) Prescriptive standards and performance goals of Subdivision 1, Division 2, Title 27, California Code of Regulations, effective July 18, 1997, and subsequent revisions;

c) Prescriptive standards and performance criteria of Part 258, Title 40, Code of Federal Regulations (Subtitle D, Resource Conservation and Recovery Act); and

d) State Water Resources Control Board Resolution No. 93-62, Policy for Regulation of Discharges of Municipal Solid Waste, adopted June 17, 1993.

19. This Order classifies the Otay Landfill as a Class III landfill, based on review of monitoring reports, geologic siting criteria and construction standards in accordance with CCR Title 27 Section 20080(e), Section 20240(b), and Section 21720(c), respectively.

20. The Regional Board, in establishing the requirements contained herein, considered factors including, but not limited to the following:

a) Beneficial uses to be protected and the water quality objectives reasonably required for that purpose;

b) Other waste discharges;

c) The need to prevent nuisance

d) Past, present, and probably future beneficial uses of the hydrologic unit under consideration;

e) Environmental characteristics of the hydrologic unit under consideration;

f) Water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality in the area;

g) Economic considerations; and

h) The need for developing housing within the region.

21. The Otay Landfill is an existing facility and as such is exempt from the provisions of the California Environmental Quality Act (CEQA) in accordance with Title 14, California Code of Regulations, Chapter 3, Article 19, Section 15301.

22. The Regional Board considered all environmental factors associated with the discharge of waste.

23. The Regional Board has notified the discharger and all known interested parties of its intent to update/revise waste discharge requirements for the Otay Landfill.

24. The Regional Board in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, that Otay Landfill Incorporated, (hereinafter discharger) shall comply with the following:

A. PROHIBITIONS

1. The discharge shall neither cause nor contribute to the contamination or pollution of ground water via the release of waste constituents in either liquid or gaseous phase.

2. The discharge shall neither cause nor contribute to any surface water contamination, pollution, or nuisance, including, but not limited to:

    a) Floating, suspended, or deposited macroscopic particulate matter or foam;

    b) Increases in bottom deposits or aquatic growth;

    c) An adverse change in temperature, turbidity, or apparent color beyond natural background levels;

    d) The creation or contribution of visible, floating, suspended, or deposited oil or other products of petroleum origin;

    e) The introduction or increase in concentration of toxic or other pollutants/contaminants resulting in unreasonable impairment of beneficial uses of waters of the State.

3. The discharge shall not cause any increase in the concentration of waste constituents in soil-pore gas, soil-pore liquid, soil, or other geologic materials outside of the Unit if such waste constituents could migrate to waters of the State – in either the liquid or the gaseous phase – and cause a condition of contamination, pollution, or nuisance.

4. The discharges of wastes to lands, which have not been specifically described, to the Regional Board and for which valid waste discharge requirements are not in force are prohibited.

5. The discharge of any hazardous waste materials as defined in Title 22 of CCR (CCR 22) at the landfill is prohibited.

6. The discharge of liquid or semi-solid waste (i.e., waste containing less than 50% solids) other than dewatered sewage or water treatment sludge as described in California Code of Regulations, Division 2, Title 27 (CCR Title 27) Section 20220(C) to the landfill is prohibited.

7. The discharge of solid waste, liquid waste or leachate to surface waters, surface water drainage courses or ground water is prohibited.

8. The discharge of municipal solid waste to a wetland [as defined in 40 CFR §232.2(r) or to any portion thereof is prohibited, unless the Regional Board finds that the discharger has successfully completed all demonstrations required for such discharge under 40 CFR §258.12 (a).

9. The disposal of designated waste at the Otay Landfill (other than as approved by this Order) is prohibited unless the discharger establishes in accordance with CCR Title 27, Section 20200 (a)(1) and to the satisfaction of the Regional Board, that the designated waste will present a lower risk to water quality.

10. The discharge to the landfill of solid waste containing free liquid or moisture in excess of the waste's moisture holding capacity is prohibited.

11. The discharge of leachate or landfill gas condensate to an MSW landfill is prohibited, unless:

    a) The landfill gas condensate or leachate is being returned to the landfill that produced it; and

    b) The portion of the landfill to which these materials are discharged is equipped with a containment system meeting the requirements of Discharge Specifications B.33, B.34, and B.35 of this Order.

12. It is prohibited to discharge wastes which have potential to reduce or impair the integrity of the containment structure or which, if commingled with other wastes in the Otay Landfill, could produce violent reaction, heat or pressure, fire or explosion, toxic byproducts, or reactions products with in turn:

    a) Require a higher level of containment than provided by the Otay Landfill;

    b) Constitute "restricted hazardous wastes"; or

    c) Impair the integrity of the containment structure.

13. The discharge of solid wastes outside of the existing footprint without a RCRA Subtitle D liner or engineered alternative as approved by this Order is prohibited.

B. DISCHARGE SPECIFICATIONS

1. Only non-hazardous wastes (including wastes approved by this Order) and inert wastes as described by CCR Title 27, Sections 20220 and 20230 may be disposed at the Otay Landfill.

2. The discharge shall remain within the designated disposal area at all times.

3. The discharger is responsible for accurate characterization of wastes, including determinations of whether or not wastes will be compatible with containment features and other wastes at the Otay Landfill in order to comply with CCR Title 27, Section 20200(C), and whether or not wastes are required to be managed as hazardous wastes under 22 CCR Section 66300.

4. Water used for facility maintenance shall be limited to the minimum amount necessary for dust control, shall only be applied by spraying and shall be applied only on covered areas and not directly on trash, in quantities not to exceed those necessary to reduce immediate dust hazards.

5. Methane and other landfill gases shall be adequately vented, removed from landfill units, or otherwise controlled to prevent the danger of explosion, adverse health effects, nuisance conditions, or the impairment of beneficial uses of water due to migration through the vadose (unsaturated) zone.

6. The owner of the waste management facility shall have the continuing responsibility to assure protection of usable waters from discharged wastes and from gases and leachate generated by discharged waste during the active life, closure, and post-closure maintenance period of the WMUs and during subsequent use of the property for other purposes.

7. The discharger shall maintain at least 5 feet of separation between the ground water and waste material at all times.

8. The Otay landfill shall have an approved load check program in compliance with CCR Title 27, Section 20870.

9. During the rainy season, the landfill shall be operated and graded to minimize infiltration and the production of leachate. The active disposal area shall be confined to the smallest area practicable, based on the anticipated quantity of waste discharge and other waste management facility operations.

Monitoring

10. The discharger shall implement the attached Monitoring and Reporting Program No. 2001-103 in order to detect, at the earliest opportunity, any unauthorized discharge of waste constituents from the Unit, or any unreasonable impairment of beneficial uses associated with (caused by) discharges of waste to the Unit.

11. The discharge shall not cause the concentration of any Constituent of Concern or Monitoring Parameter to exceed its respective background value in any monitored medium at any Monitoring Point assigned to Detection Monitoring pursuant to Section B of the attached Monitoring and Reporting Program No. 2000-01.

12. The discharge shall not cause the release of pollutants, or waste constituents in a manner which could cause a conditions of contamination, pollution, or nuisance to occur, as indicated by the most appropriate statistical [or non-statistical] data analysis method and retest method listed in Section **C. Response to a Release**, of the attached Monitoring and Reporting Program No. 2000-01.

Erosion Control and Landfill Cover

13. Annually, by October 31, the discharger shall implement adequate erosion control measures, maintenance and repairs of the landfill cover, drainage control facilities and use soil stabilization practices on all disturbed areas of the landfill to prevent erosion or flooding of the facility and to prevent surface drainage from contacting or percolating through wastes. The soil stabilization practices shall be designed to revegetate open areas as soon as feasible after grading or maintenance. In developing these practices, the discharger shall consider: temporary seeding, permanent seeding, mulching, vegetative buffer strips or other soil stabilization practices. At a minimum, the discharger must implement these practices on all disturbed areas during the rainy season.

14. Where flow concentrations result in erosive flow velocities, surface protection such as asphalt, concrete, riprap, or other erosion control material shall be used for protection of drainage conveyance features. Interim bench ditches shall be provided with erosion control material and riprap to control erosion where necessary.

15. Energy dissipaters shall be installed to control erosion at locations where relatively high erosive flow velocities are anticipated.

16. Where high velocities occur at terminal ends of downchutes or where downchutes cross the final cover access roads, erosion control material shall be applied to exposed soil surfaces.

17. Silt fences, hay bales, and other measures shall be used to control noncontact surface water runoff from landfill areas where daily, intermediate and final cover have been placed, and from areas where landfill containment system construction is occurring.

18. Areas with slopes greater than 10 percent, surface drainage courses, and areas subject to erosion by wind or water shall be designed and constructed to minimize such erosion.

19. The working face of the landfill shall be limited to one day of operation at a time, so as to minimize the amount of contact water.

20. Slopes on the landfill shall be benched to control flow velocities.

21. Landfill areas with intermediate cover (as defined in CCR Title 27, Section 20700), which have been/will be exposed for longer than two rainy seasons shall be a minimum of two-feet of soil cover maintained over the landfill unit. Intermediate cover shall be designed and constructed to minimize percolation of liquids through wastes.

22. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of discharged wastes over the operating life, closure, and post-closure maintenance period of the waste management unit.

Drainage

23. Surface drainage from the landfill is subject to State Board Order No. 97-03-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001 (General Permit), **Waste Discharge Requirements (WDRS) for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities.**

24. Surface drainage from tributary areas and internal site drainage from surface and subsurface sources shall not contact or percolate through waste and shall either be contained onsite or be discharged in accordance with applicable storm water regulations.

25. Any precipitation that falls on the working face of the landfill and comes in contact with waste (contact water) shall be treated as leachate.

26. Noncontact surface water runoff within the boundary of the landfill (i.e., precipitation that falls on the intermediate and final cover) shall be collected by a system of berms, ditches, downchutes, swales and drainage channels, and shall be diverted off the landfill to either the detention basins or to the natural watercourses offsite.

27. Sediments shall be removed from the detention basins whenever the volume of the basin has been reduced by 25% of the basin's design capacity.

Landfill Construction

28. The Otay Landfill shall be designed, constructed and operated to prevent inundation or washout due to a 100-year flood.

29. The landfill and related containment structures shall be constructed and maintained to prevent, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, and overtopping under a 100-year, 24-hour storm.

30. Each landfill unit phase constructed after the effective date of this Order shall be designed and constructed in accordance with CCR Title 27 and this Order and approved by the Regional Board prior to discharge of waste.

31. Hydraulic conductivities determined through laboratory methods shall be confirmed by appropriate field testing, and the results shall be submitted to the Regional Board prior to construction.

Engineered Alternative Liner

32. **The Regional Board approved an alternative liner design on September 22, 1992.** The alternative liner system was shown to perform equal to or better that the prescriptive design. The alternative liner design includes an 80-mil thick high density polyethylene (HDPE) geomembrane along the base and side slope. The 80-mil thick HDPE geomembrane on the base is textured on both sides and is placed on 12 inches of subgrade scarified and recompacted to 95 percent of the maximum dry density obtained in accordance with ASTM D 1557. The subgrade materials must meet the requirements of CCR Title 27 §20320.(d). The 80-mil thick HDPE geomembrane on the side slopes is textured on the subgrade side and smooth on the waste side. The side slopes are inclined 2H:1V (horizontal:vertical) with 15 foot wide benches placed approximately every 45 feet vertically.

33. The 80-mil thick HDPE geomembrane on the side slopes is textured on the subgrade side and smooth on the waste side. The side slopes are inclined 2H:1V (horizontal:vertical) with 15 foot wide benches placed approximately every 45 feet vertically.

25. A Construction Quality Assurance (CQA) report including a summary of the CQA program and all test results, analyses and copies of the inspector's original field notes, along with a certification as described in CCR Title 27 Section 20324, shall be submitted to the Regional Board upon completion of each phase of construction, and prior to the discharge of waste into the constructed phase.

Leachate Collection and Removal System

26. All containment systems shall include a leachate collection and removal system (LCRS) which shall convey all leachate which reaches the liner to an appropriately

lined sump or other appropriately lined collection area. The LCRS shall not rely upon unlined or clay-lined areas or such conveyance.

27. Materials used to construct leachate collection and removal systems (LCRS) shall have appropriate physical and chemical properties to ensure the required transmission of leachate over the life of the WMU and the post-closure maintenance period.

28. LCRS shall be designed, constructed, and maintained to collect twice the anticipated daily volume of leachate generated by the WMU and to prevent the buildup of hydraulic head on the underlying liner at any time. The depth of fluid in any LCRS sump shall be kept at or below six inches, the minimum needed to ensure efficient pump operation.

29. The LCRS shall function without clogging throughout the active life of the waste management unit and during the post-closure maintenance period.

30. Leachate generation by a landfill unit LCRS shall not exceed 85% of the design capacity of the LCRS or the sump pump. If leachate generation exceeds this value and/or if the depth of fluid in the LCRS sump exceed 24 inches, then the discharger shall immediately cease the discharge of sludge and other high-moisture wastes to the landfill unit and shall notify the Regional Board in writing within seven days. Notification shall include a timetable for a corrective action necessary to reduce leachate production.

Discharge of Contaminated Soils Within Lined Areas

31. Soil samples shall be taken in accordance with sampling guidelines set forth in the most recently promulgated edition of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846", U.S. Environmental Protection Agency. At a minimum, for quantities of soil less than or equal to 500 cubic yards, four samples per 100 cubic yards will be taken. For quantities of soil between 500 to 5000 cubic yards, an additional sample shall be taken for every 500 cubic yards.

32. Waste soils shall be discharged into lined areas specifically approved by the Regional Board in accordance with CCR Title 27. Soils may also be utilized for daily landfill cover within lined units if approved for such use by the appropriate agencies.
33. All wastes received at the Otay Landfill are to be certified California non-hazardous according 22 CCR.

34. Lined Class III waste Management Units, as designed, may accept only soils contaminated with petroleum hydrocarbons, organic and inorganic compounds, metals, and pesticides below the following concentration limits which could pose a threat to water quality if discharged in an uncontrolled manner:

    a) Soils containing non-hazardous concentrations of metals and pesticides, organic and inorganic compounds shall not exceed hazardous waste

classifications as determined using the waste extraction test (WET) (Reference 22 CCR Section 66261.24, as amended).

b) Soils containing non-hazardous concentrations of metals, pesticides, organic and inorganic compounds shall not exceed maximum concentrations of contaminants using Toxicity Characteristic Leaching Procedure (TCLP) analysis (Reference 22 CCR Section 66261.24, as amended).

c) The discharge of total lead at concentrations shall not exceed the threshold for hazardous concentration established in 22 CCR. The current level is 1000 mg/kg (ppm). This Order would not effect the concentration levels established in 22 CCR Section 25157.8(a) for Nickel and Copper as these are equivalent to the threshold for hazardous waste concentration levels in 22 CCR.

d) Soils containing non-hazardous concentrations of petroleum hydrocarbons. The following maximum concentration levels will be used to determine if soils containing petroleum hydrocarbons are acceptable for disposal.

Petroleum Hydrocarbon Contaminant	Maximum Concentration Limits	
Gasoline and lighter end hydrocarbons (C_4 -C_{12})	1,000 ppm TPH	1,000 -5,000 ppm TPH w/RCI and 96 hour bioassay
Diesel fuel, Kerosene Oil, Jet Fuel, (C_8-C_{22}) heavy end hydrocarbons	3,000 ppm TPH	3,000 -15000 ppm TPH w/RCI and 96 hour bioassay
Hydraulic Oil, Cutting and Grinding Oil, Virgin Motor Oil, Waste Oil (C_8-C_{40} heavy end hydrocarbons)	3000 ppm TRPH	3,000 -15000 ppm TPH w/RCI and 96 hour bioassay

TPH - Total Petroleum Hydrocarbon
TRPH - Total Recoverable Petroleum Hydrocarbon
RCI - Hazardous Waste Criteria for Reactivity, Corrosivity, Ignitability and 96-Hour Acute Bioassay as established by CCR 22

35. Test Methods for Soils Containing Petroleum Hydrocarbons:

The following test methods shall be performed for soils containing Petroleum Hydrocarbons.

Petroleum Constituent	TPH (8015M) Gas	TPH (8015 M Diesel	(EPA 418.1)	BTEX (8020)	Lead (TCLP)	Metals (Cd, Cr, Pb, Ni, Zn), OX, and PCBs	Semi-Volatile Organics (8270 or EPA 625)	Volatile organics (8260)	Metals (CAM 17), and PCBs

Leaded Gasoline	[redacted]			[redacted]	[redacted]				
Unleaded gasoline	[redacted]			[redacted]	*				
Kerosene Oil		[redacted]		[redacted]					
Jet Fuel		[redacted]		[redacted]					
Diesel Fuel		[redacted]		[redacted]					
Hydraulic Oil		[redacted]				[redacted]			
Cutting and Grinding Oil		[redacted]				[redacted]			
Virgin Motor Oil		[redacted]					[redacted]		
Waste Oil		[redacted]					[redacted]	[redacted]	

**** with documentation that only unleaded gas was historically on site***

36. Test Methods for Soils Containing Metals and Pesticides

The analyses can include the following methodologies:

TPH (418.1 or 8015M)	TCLP Analysis (8 RCRA metals)
8260	CAM 17
8270 (Semi-VOCs)	8080 (Chlorinated pesticides and PCBs)
8150 (herbicides)	

37. Recordkeeping

Copies of the waste approvals will be kept on file at the facility and at a minimum will include:

a) Certification from the generator certifying that the analyses submitted are representative of the material to be disposed.

b) Analytical data or Material and Safety Data Sheets representing the waste stream.

c) The Chain-of-Custody form showing the sample's integrity was not compromised.

d) The approximate yardage of the material and the transporter information.

Closure and Post-Closure

38. The closure of the Otay Landfill shall be in accordance with CCR Title 27 Chapter 3, Subchapter 5, Articles 1 and 2, and Section 21710(d), and under the direct supervision of a California registered civil engineer or certified engineering geologist.

39. At closure, the Otay Landfill shall receive a final cover which is designed and constructed to function with minimum maintenance, and consists of, at minimum, 2-foot thick foundation layer which may contain waste materials, overlain by a 2-foot thick clay liner having a permeability of 1×10^{-6} cm/sec or less, overlain by a one-

foot vegetation layer or an engineered equivalent final cover approved by the Regional Board pursuant to CCR Title 27 Section 20080(b) and (c).

40. The post-closure maintenance period shall continue until the Regional Board determines that remaining wastes in all waste management units (WMUs) will not threaten water quality.

41. Vegetation overlaying the landfill shall be selected to require minimum irrigation and maintenance, and shall not impair the integrity of the landfill cover or containment structures.

42. The discharger shall comply with all applicable requirements of CCR Title 27 Subchapter 5, Article 2 for closure and post-closure maintenance of the Otay Landfill. Title 27, CCR Subchapter 5, Article 2 establishes closure and post-closure maintenance requirements.

C. PROVISIONS

1. Neither the treatment nor the discharge of waste shall create a pollution, contamination or nuisance, as defined by Section 13050 of the California Water Code.

2. The discharger must comply with all applicable provisions of CCR Title 27 and all conditions of this Order. Any noncompliance with this Order constitutes a violation of the California Water Code and is grounds for (a) enforcement action; (b) termination, revocation and reissuance, or modification of this Order; or (c) denial of a report of waste discharge in application for new or revised waste discharge requirements.

3. In an enforcement action, it shall not be a defense for the discharger, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this Order.

4. The discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.

5. The discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with conditions or this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures.

6. This Order may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:

   a) Violation of any terms or conditions of this Order;

   b) Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts; or

   c) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge. The filing of a request by the discharger for the modification, revocation and reissuance, or termination of this Order, or notification or planned changes or anticipated noncompliance does not stay any condition of this Order.

7. This Order is not transferable to any person except after notice to the Regional Board. The Regional Board may require modification or revocation and reissuance of this Order to change the name of the discharger and incorporate such other requirements as may be necessary under the California Water Code. The discharger shall submit notice of any proposed transfer of this Order's responsibility and coverage to a new discharger as described under Reporting Requirement D.1(f).

8. This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the discharger from liability under federal, state, or local laws, nor create a vested right for the discharger to continue the waste discharge.

9. The discharger shall allow the Regional Board, or an authorized representative upon the presentation of credentials and other documents as may be required by law, to:

   a) Enter upon the discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;

   b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;

   c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

   d) Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order or as otherwise authorized by the California Water Code, any substances or parameters at any location.

10. The discharger shall ensure that all site-operating personnel are familiar with the content of this Order and shall maintain a copy at the Otay Landfill.

11. This Order becomes effective on the date of adoption by the Regional Board. This Order supersedes Order 90-09 and addenda. Order No. 93-86 is hereby amended to delete the Otay Landfill from §1. Applicability.

12. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order shall not be affected thereby.

13. The post-closure maintenance period shall continue until the Regional Board determines that remaining wastes in the landfill will not threaten water quality.

14. The concentration of indicator parameters or waste constituents in waters passing through the Point of Compliance shall not exceed the "water quality protection standards" established pursuant to Monitoring and reporting Program No. 2000-01, which is attached to and made part of this Order.

D. REPORTING REQUIREMENTS

1. The discharger shall file a new Report of Waste Discharge at least 120 days prior to the following:

    a) An increase in area or depth to be used for solid waste disposal beyond that specified in waste discharge requirements;

    b) A significant change in the disposal method, location or volume (e.g., change from land disposal to land treatment);

    c) A change in the type of waste being accepted for disposal;

    d) The addition of a major industrial waste discharge to a discharge of essentially domestic waste, or the addition of a new process or product by an industrial facility resulting in a change in the character or type of waste being discharged; or

    e) Any planned change in the regulated facility or activity which may result in noncompliance with this Order.

    f) Any proposed transfer of this Order's responsibility and coverage to a new discharger. The notice must include a written agreement between the existing and new discharger containing a specific date for the transfer of this Order's responsibility and coverage between the current discharger

and the new discharger. This agreement shall include an acknowledgement that the existing discharger is liable for violations up to the transfer date and that the new discharger is liable from the transfer date on.

2. The discharger shall furnish to the Regional Board, within a reasonable time, any information which the Regional Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The discharger shall also furnish to the Regional Board, upon request, copies of records required to be kept by this Order.

3. The discharger shall comply with the attached Monitoring and Reporting Program No. 2001-103, and future revisions thereto as specified by the Regional Board. Monitoring results shall be reported at the intervals specified in Monitoring and Reporting Program No. 2001-103.

4. Where the discharger becomes aware that it failed to submit any relevant facts in a Report of Waste Discharge, or submitted incorrect information in a Report of Waste Discharge, or in any report to the Regional Board, it shall promptly submit such facts or information.

5. The discharger shall report any noncompliance, which may endanger health or the environment, such as slope failure occurring in the waste management unit. Any such information shall be provided orally to the Regional Board within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within five days of the time the discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Regional Board, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

6. The discharger shall immediately notify the Regional Board of any flooding, equipment failure, slope failure, or other change in site conditions which could impair the integrity of waste containment facilities or of precipitation and drainage control facilities.

7. The discharger shall immediately report by telephone, concerning the discovery of any previously unreported seepage from the disposal area. A written report shall be filed with the Regional Board within seven days, containing at least the following information:

   a) A map showing the location(s) of the seepage;

b) An estimate of the flow rate;

c) A description of the nature of the discharge (e.g., all pertinent observations and analyses); and

d) Corrective measures approved (or proposed for consideration) by the Regional Board.

8. At least **120 days** prior to the beginning of construction for each new construction phase, a Final Design Report shall be submitted to the Regional Board and shall include, but not be limited to, the engineered design plans, the contract specifications, a construction quality assurance (CQA) plan to verify that construction specifications will be met, and a revised water quality monitoring plan. Concurrence with the final design report shall be obtained from Regional Board staff prior to the construction of the landfill liner or cover. A final construction report shall be submitted to the Regional Board after each phase of construction and prior to the discharge of waste into the constructed phase. The final construction report shall include, but not be limited to, as-built plans, a CQA report with a written summary of the CQA program and all test results, analyses, and copies of the inspector's original field notes, and a certification as described in CCR Title 27 Section 20324, consistent with section B.35 of this Order.

9. The discharger shall maintain legible records of the volume (cubic yards) and type (i.e., municipal solid waste, construction debris, ash, tires, woodwaste, etc.) of each waste discharged at the landfill and the manner and location of discharge. Such records shall be maintained at the facility until the beginning of the post-closure maintenance period. These records shall be available for review by representatives of the Regional Board, at any time during normal business hours.

10. The discharger shall provide proof to the Regional Board within sixty days after completing final closure that the deed to the landfill facility property, or some other instrument that is normally examined during title search, has been modified to include, in perpetuity, a notation to any potential purchaser of the property stating that:

a) The parcel has been used as a municipal solid waste landfill (MSWLF);

b) Land use options for the parcel are restricted in accordance with the post-closure land uses set forth in the post-closure plan and in WDRs for the landfill; and

c) In the event that the discharger defaults on carrying out either the post-closure maintenance plan or any corrective action needed to address a release, then the responsibility for carrying out such work falls to the property owner.

11. The discharger shall notify the Regional Board at least 180 days prior to the beginning of any activities for partial or final closure of the landfill, in accordance with CCR Title 27, Section 21710(c)(5).

12. The discharger or persons employed by the discharger shall comply with all notice and reporting requirements of the California Department of Water Resources with regard to the construction, alteration, destruction, or abandonment of all monitoring wells used for compliance with this Order or with Monitoring and Reporting Program No. 2001-103, as required by Sections 13750 through 13755 of the California Water Code.

13. By November 15 each year, the discharger shall submit:

    a) An annual report describing measures taken to comply with Discharge Specification B.14.

    b) A copy of its Storm Water Pollution Prevention Plan, or as updated.

14. All reports pursuant to this Order shall be prepared under the supervision of a California Registered Civil Engineer or a Certified Engineering Geologist.

15. All applications, reports, or information submitted to the Regional Board shall be signed and certified as follows:

    a) The Report of Waste Discharge shall be signed as follows:

        1) For a corporation – by a principal Regional Board of at least the level of vice-president.

        2) For a partnership or sole proprietorship – by a general partner or the proprietor, respectively.

        3) For a municipality, state, federal or other public agency – by either a principal Regional Board or ranking elected official.

        4) For a military installation – by the base commander or the person with overall responsibility for environmental matters in that branch of the military.

    b) All other reports required by this Order and other information required by the Regional Board shall be signed by a person designated in paragraph (a) of this provision, or by a duly authorized representative of that person. An individual is a duly authorized representative only if:

        1) The authorization is made in writing by a person described in paragraph (a) of this provision;

2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity; and

3) The written authorization is submitted to the Regional Board.

c) Any person signing a document under this Section shall make the following certification:

"I certify under penalty of law, that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

16. The discharger shall submit reports required under this Order, or other information required by the Regional Board, to:

Regional Board
Attention: Land Discharge Unit
California Regional Water Quality Control Board
San Diego Region
9771 Clairmont Mesa Blvd, Suite A
San Diego, California 92124-1331

E. FINANCIAL ASSURANCE

1. The discharger shall maintain assurances of financial responsibility for initiating and completing corrective action for all known and reasonably foreseeable releases from the landfill. The discharger shall also maintain an irrevocable closure fund or other means to ensure adequate closure and post-closure maintenance of the landfill, with the Regional Board named as the beneficiary, pursuant to CCR Title 27, Chapter 6, Article 4, Section 22222.

2. The discharger shall submit a status report regarding the financial assurances for corrective action and closure every five years after the date of adoption of these requirements that either validates the ongoing viability of the financial instruments or proposes and substantiates any needed changes,

F. NOTIFICATIONS

1. California Water Code Section 13263(g) states:

"No discharge of waste into waters of the state, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. Al discharges of waste into waters of the state are privileges, not rights."

2. These requirements have not been officially reviewed by the United States Environmental Protection Agency and are not issued pursuant to Section 402 of the Clean Water Act.

3. The California Water Code provides that any person who intentionally or negligently violates any waste discharge requirements issued, reissued, or amended by this Regional Board is subject to a civil monetary remedy of up to 20 dollars per gallon of waste discharged or, if a Cleanup and Abatement Order is issued, up to 15,000 dollars per day of violation, or some combination thereof.

4. The California Water code provides that any person failing or refusing to furnish technical or monitoring program reports, as required under this Order, or falsifying any information provided in the monitoring reports is guilty of a misdemeanor and may be subject to administrative civil liability of up to one thousand dollars per day of violation.

5. Definitions of terms used in this Order shall be set forth in Subdivision 1, Division 2, CCR Title 27 and 40 CFR 258.

6. Operation of the Otay Landfill may be subject to regulations of the California Integrated Waste Management Board.

7. This Order becomes effective on the date of adoption by the Regional Board.

I, John H. Robertus, Regional Board, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on _____.

_____
JOHN H. ROBERTUS
Executive Officer